



HEC PILOT TRAINING PROGRAM

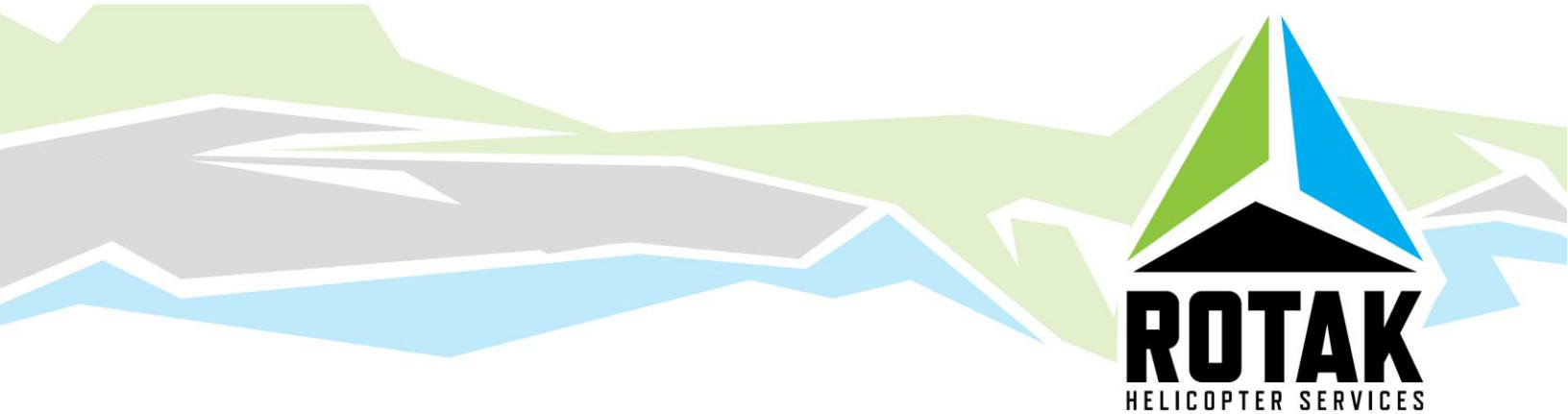




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REVISIONS

- Revisions will be prepared by the Director of Operations or Chief Pilot. Each revision will have a revision number, date, and page numbers being revised.
- It will be the responsibility of each manual holder to keep his manual current and record any revisions on this page. Revisions will be given out by the Director of Operations or the Chief Pilot.
- All Manual Revisions will be available to the FAA for review.
- Revision control is accomplished in the upper right-hand corner of each page. The following is an explanation of the terms found:

R-0/01-01-00

1 Represents Page 1, found in lower center of each page.
R-0 Represents Original, R-0 would be revision 1.
01-01-00 Represents the date the revision became effective.

Log of Revisions	
Revision Number	Effective Date of Revision



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**EFFECTIVE PAGES**

This listing contains all current pages, with effective dates, of the Training Manual. It should be used after posting changes to insure the manual is complete and up-to-date.

Page	Revision #	Effective Date	Page	Revision #	Effective Date
1	R-0	05/01/2018			
2	R-0	05/01/2018			
3	R-0	05/01/2018			
4	R-0	05/01/2018			
5	R-0	05/01/2018			
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10	R-0	05/01/2018			
11	R-0	05/01/2018			
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13	R-0	05/01/2018			
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ROTAK LLC / USE OF THIS MANUAL

This training program will provide the guidance necessary to guarantee all company operations are conducted safely, efficiently and in accordance with all applicable regulations in regards to Human External Cargo (HEC) operations. No pilot will be assigned duties until that pilot has met the hour requirements outline in AC 133-1B 3.4.2.6.5 page 3-12 and has completed this curriculum and passed the proficiency checks, which are based directly off the Interagency Helicopter Pilot Practical Test Standards.

Revision control is accomplished in the upper right-hand corner of each page. The following is an explanation of the terms found:

R-0/01-01-00

R-0	Represents Revision 0 (Original)
01-01-00	Represents the date the revision became effective

This manual contains pilot hour requirements, pilot training requirements, and a skills-based qualification segment. Satisfactory completion of the training curriculum and the skills-based qualification segment qualifies the student to operate under ROTAK's HEC exemption for Class B HEC operations as pilot in command on the aircraft that the training was received on.

COMPLETION STANDARDS

Each pilot will successfully demonstrate his knowledge in all HEC ground operations including proper briefing and understanding of all equipment involved with the HEC operation. Furthermore, the pilot must demonstrate proper control of the HEC load during the flight skills segment. Any student who fails to pass an exam or fails to properly demonstrate an event will receive additional training until an adequate amount of knowledge is attained. If after two attempts, the student still cannot pass an exam or fails to properly demonstrate an event, he or she will be removed from training status.

Each pilot shall fly the aircraft in a manner which demonstrates the pilot is the obvious master of the external load with successful outcome of the desired maneuver never in doubt. Flight standards will be based on the Interagency Helicopter Practical Test Standards and the maneuvers listed in section VI External Load Operations, Task B.



PILOT QUALIFICATION REQUIREMENTS

1. ROTAK REQUIRED CERTIFICATES

All pilots must hold a current company Part 133 endorsement and at the completion of this training, receive a company Class B HEC external load endorsement. If a pilot does not hold the required certificates and/or ratings, they must be obtained when completing the qualification curriculum segments.

A. Pilot Certification Requirements - Helicopters

The pilot certification requirements for Part 133 helicopter operations depend on the kind and type of operation being conducted and the types of aircraft used.

- Commercial Pilot Certificate (or ATP Certificate)
- Rotorcraft Category Rating
- Helicopter Class Ratings
- At least a second-class medical certificate

2. MINIMUM PIC FLIGHT EXPERIENCE REQUIREMENTS

All flight experience is based on AC 133-1B, 3.4.2.6.5, page 3-12. The student must have acquired the minimum number of flight hours before serving as PIC.

- A. Before serving as PIC while conducting 133 Class B HEC operations, the pilot must have accumulated at least the following flight hour experience:
- i. 2,000 hours as pilot in command (PIC) in helicopters
 - ii. 500 hours of vertical reference long line experience
 - iii. 200 hours as PIC in specific make and model helicopter to be used in the Class B HEC operation
 - iv. 200 hours as PIC conducting precision vertical reference, long line operations.



RECORDKEEPING

1. The Director of Operations and Chief Pilot will assemble and keep on file a training folder for each individual as required by the appropriate regulation. In that training file will be kept certificates of training courses completed. A record of all initial and recurrent training will be established and maintained. Information required to be maintained for each pilot used under this part includes but is not limited to:
 - The full name of the pilot.
 - The pilot certificate, by type and number, and ratings that the pilot holds.
 - The pilot's aeronautical experience in sufficient detail to determine the pilot's qualifications to pilot the aircraft in operations under this part.
 - The pilot's current duties and the date of the pilot's assignment to those duties.
 - The effective date and class of the medical certificate that the pilot holds.
 - The date and result of each of the initial and recurrent competency tests.
 - The pilot's flight time in sufficient detail to determine compliance with the flight time requirements.
 - Any action taken concerning the pilot's release from employment for physical or professional disqualification.
 - The date of the completion of the initial phase and each recurrent phase of training.
2. Each segment of training (ground, flight, proficiency or competency check) shall be certified by the applicable ground instructor or flight instructor as to the proficiency and knowledge of the crewmember upon completion of the training or check. This certification will be a part of the crewmember's training record.
3. The Director of Operations and/or Chief Pilot will maintain a record of the satisfactory completion of initial and recurrent training given to crewmembers and appropriate personnel who perform Class B HEC operations.
4. All records will be kept for a period of 5 years after the date of which an employee is terminated or leaves the company on his/her own accord. These records will be kept in the pilots folder at the ROTAK base of operations.



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**INITIAL CLASS B HEC TRAINING
GENERAL INFORMATION**

This training is for personnel who will be utilizing class B HEC operations. The ground and flight portions of this segment must be completed in their entirety in order for a student to be authorized to conduct Class B HEC external load operations.

The objective of initial training is to ensure that pilots learn to be knowledgeable of, and proficient in ROTAK HEC operations. This includes ground operations and flight operations, as well as providing training to personnel who will be flying on the line as human external cargo. Periodic recurrent training will be required which will provide instructors with an opportunity to introduce pilots to changes in ROTAK's operating procedures.

The instructor will ensure that the training is documented on the appropriate curriculum training forms upon the completion of each segment.



INITIAL CLASS B HEC TRAINING OUTLINE

CURRICULUM: Initial CLASS B HEC training.

BASE AIRCRAFT: **KMAX K-1200**

TRAINING HOURS: 5 hours

The following curriculum segments make up this curriculum and must be completed:

- GROUND TRAINING
- FLIGHT TRAINING
- QUALIFICATION



**RECURRENT CLASS B HEC TRAINING
GENERAL INFORMATION**

The recurrent category of training is conducted for pilots who have been previously trained and qualified by ROTAK, who are continuing to conduct Class B HEC operations.

The objective of recurrent training is to ensure that pilots continue to be knowledgeable of, and proficient in HEC operations. Periodic recurrent training also provides operators with an opportunity to introduce pilots to changes in ROTAK operating procedures, pilot's duties and responsibilities, and in developments within the operating environment and aviation industry.

In order for a ROTAK pilot to remain qualified to conduct Class B HEC operations, he/she must have satisfactorily completed the approved ROTAK recurrent training curriculums within the previous 12 months.



RECURRENT CLASS B HEC TRAINING

CURRICULUM: Recurrent CLASS B HEC operations.

This training ensures that each pilot is adequately trained and currently proficient for the operations performed by ROTAK LLC.

The following curriculum segments make up this curriculum:

- GROUND TRAINING
- FLIGHT TRAINING
- QUALIFICATION

The instructor will record all training on the recurrent training form found in the FORMS section of this training program.



**INSTRUCTOR / CHECK PILOT CLASS B HEC
TRAINING GENERAL INFORMATION**

The recurrent category of training is conducted for pilots who have been previously trained and qualified by ROTAK, who are continuing to conduct class b HEC operations.

The objective of recurrent training is to ensure that pilots continue to be knowledgeable of, and proficient in HEC operations. Periodic recurrent training also provides operators with an opportunity to introduce pilots to changes in ROTAK LLC operating procedures, in the pilot's duties and responsibilities, and in developments within the operating environment and aviation industry.

In order for a ROTAK pilot to remain qualified to conduct Class B HEC operations, he/she must have satisfactorily completed the approved ROTAK recurrent training curriculums within the previous 12 months.



**INSTRUCTOR / CHECK PILOT
CLASS B HEC TRAINING**

CURRICULUM: Recurrent CLASS B HEC operations.

This training ensures that each pilot is adequately trained and currently proficient for the operations performed by ROTAK LLC.

The following curriculum segments make up this curriculum:

- GROUND TRAINING
- FLIGHT TRAINING
- QUALIFICATION

The instructor will record all training on the recurrent training form found in the FORMS section of this training program.



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**CLASS B HEC
GROUND TRAINING MODULE # 1**

SUBJECT: HEC EQUIPMENT FAMILIARIZATION

OBJECTIVE: To become familiar with all equipment associated with HEC operations

TRAINING HOURS: 2 hours Initial / As needed for recurrent

- ARS belly band system and how to attach
- Long line inspection and procedures for keeping line clean and free of debris
- Rigging attachment clips and proper use
- Harness systems, including proper/improper way to attach to the line
- Use of the external belly band release
- Proper inspection of all equipment
- Proper stowage of all equipment
- Procedures for training HEC crew members and familiarization with associated paperwork



**CLASS B HEC
FLIGHT TRAINING MODULE # 2**

SUBJECT:	Flight training / familiarization to Class B HEC operations
OBJECTIVE:	To ensure the student understands and is familiar with all procedures associated with Class B HEC operations and meets the required skill level necessary to pass the qualification module.
COURSEWARE:	KMAX K-1200 RFM and the Interagency PTS
TRAINING HOURS:	2 hours Initial / As needed for recurrent

The following elements will be addressed by the completion of this module.

- Correct / Incorrect ground signals
- Methods for gaining the attention of the HEC
- Proper shagging of the HEC long line
- Familiarization of the Interagency PTS skills course



**CLASS B HEC
QUALIFICATION MODULE # 3**

SUBJECT: CLASS B HEC ORAL AND FLIGHT CHECK

OBJECTIVE: To ensure the student meets all the appropriate Class B HEC standards in regards to ground and flight operations.

HOURS: As required Initial / Recurrent

PRACTICAL EVALUATION

- Demonstrates adequate knowledge of all items listed in module #1
- Demonstrates adequate knowledge of all ground signals and reacts appropriately
- Meets the requirements set forth in training module #2 for flight operations

COMPLETION STANDARDS

The ground-based portion will be fulfilled when the applicant properly displays all knowledge associated with ROTAK's Class B HEC operations. The flight portion will be fulfilled when the applicant meets the standards set forth in the Interagency Practical Test Standards section for HEC operations.



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INSTRUCTOR / CHECK PILOT TRAINING

This training is for personnel who instruct/evaluate other airmen performing their duties and responsibilities for their duty position and to ensure those airmen operate the aircraft to the desired standards, and to be able to certify as to the competence of those airmen. The Chief Pilot will work closely with the flight instructors and check pilots to ensure continuity. Instructors who provide training in Class B HEC operations do not have to be current in the aircraft or hold a current medical.



**CLASS B HEC INITIAL / RECCURENT
INSTRUCTOR / CHECK PILOT TRAINING**

OBJECTIVE: To develop the necessary skills and knowledge to instruct/evaluate other airman performing their duties and responsibilities in regards to class B HEC operations and to ensure those airmen operate the aircraft to the desired standards, and to be able to certify as to the competence of those airman.

TRAINING HOURS: As required

GROUND TRAINING

- ARS belly band system and how to attach
- Long line inspection and procedures for keeping line clean and free of debris
- Rigging attachment clips and proper use
- Harness systems, including proper/improper way to attach to the line
- Use of the external belly band release
- Proper inspection of all equipment
- Proper stowage of all equipment
- Procedures for training HEC crew members and familiarization with associated paperwork
- Proper technique for pilots and HEC crew to gain ones attention while in the air
- Proper hand / head signals
- Familiarization with the Interagency PTS flight standards

QUALIFICATION

No flight training is required for the instructor / check pilot training. However, it is required that the applicant observe a ground and flight check given by the Chief Pilot or designed instructor pilot.



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INITIAL / RECURRENT (CIRCLE ONE)
CLASS B HEC TRAINING / QUALIFICATION FORM

This is to certify that _____ has
(NAME)

received training in accordance with ROTAK's Class B HEC training manual and pass the required qualification segment in the following aircraft:

AIRCRAFT MAKE, MODEL & CLASS: _____

DATE: _____

RECURRENT DUE: _____

Training has been received in the following sections:

Curriculum Segment	Date Completed	Student Signature	Instructors Sign.
Ground Training			
Flight Training			
Special (reserved)			
Qualification			

INSTRUCTORS SIGNATURE: _____

STUDENTS SIGNATURE: _____

COMMENTS ARE TO BE LISTED BELOW



**INITIAL / RECURRENT INSTRUCTOR (CIRCLE ONE)
CLASS B HEC TRAINING / QUALIFICATION FORM**

This is to certify that _____ has
(NAME)

received training in accordance with ROTAK's Class B HEC training manual and is proficient to act as an instructor in the following aircraft for HEC operations:

AIRCRAFT MAKE, MODEL & CLASS: _____

DATE: _____

RECURRENT DUE: _____

Training has been received in the following sections:

Curriculum Segment	Date Completed	Student Signature	Instructors Sign.
Ground Training			
Flight Training			
Special (reserved)			
Qualification			

INSTRUCTORS SIGNATURE: _____

STUDENTS SIGNATURE: _____

COMMENTS ARE TO BE LISTED BELOW